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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,920	01/03/2002	Tomoyuki Kayama	217916US0	2282

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EXAMINER
HAILEY, PATRICIA L

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 07/16/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,920

Applicant(s)

KAYAMA ET AL.

Examiner

Patricia L. Hailey

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on April 29, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-21 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Applicants' remarks and amendments, filed on April 29, 2003, have been carefully considered. No claims have been canceled or added; claims 1-21 remain pending in this application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicants' Priority Document was filed on March 27, 2002.

Allowable Subject Matter

2. The indicated allowability of claims 6-8 and 11 is withdrawn in view of the newly discovered reference(s) to Weimer et al. (U. S. Patent No. 6,565,820) and to Datta et al. (U. S. Patent No. 4,898,845). Rejections based on the newly cited reference(s) follow.

New Ground(s) of Rejection

3. Applicant's arguments with respect to claims 1-21 and the previously cited 103(a) rejections over Pennington (U. S. Patent Nos. 4,959,486 and 4,943,643) have been considered but are moot in view of the new ground(s) of rejection.

The new ground(s) of rejection is(are) being made in view of the newly discovered reference(s) to Weimer et al. (U. S. Patent No. 6,565,820) and to Datta et al. (U. S. Patent No. 4,898,845).

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

5. Claims 1-3, 5, 6, 9, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weimer et al. (U. S. Patent No. 6,565,820).

Weimer et al. disclose a catalyst comprising particles of molten salt supported on a support material. See col. 2, line 65 to col. 3, line 2 of Weimer et al., as well as col. 4, line 27.

Exemplary supports include silicon oxide, alumina, zirconia, titania, calcium oxide, and various types of materials. See col. 4, line 56 to col. 5, line 32 of Weimer et al.

Examples of the molten salt include lithium nitrate. Molten salt loadings are generally preferred to be as high as possible, such as less than 2% by weight based on the weight of non-porous support particles, and such as up to 20% by weight or more based on the weight of porous support particles. See col. 5, line 48 and col. 5, line 65 to col. 6, line 29 of Weimer et al.

The catalyst is useful in a number of chemical reactions, such as combustion reactions. See col. 1, lines 25-55 of Weimer et al., especially lines 44-55.

Although Weimer et al. does not specifically recite the claim limitation "for purifying particulate materials, which are contained in an exhaust gas emitted from an internal combustion engine and contain carbon", such a limitation is considered one of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Additionally, because Weimer et al. as discussed above teach the limitations of the claims in their present form, i.e., molten salt components and support components comparable to that respectively claimed, it would have been obvious to one of ordinary skill in the art to expect the catalyst of Weimer et al. to be useful for Applicants' intended use, absent the showing of convincing evidence to the contrary.

6. Claims 1-11 and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Datta et al. (U. S. Patent No. 4,898,845)

Datta et al. teach catalysts comprising microcrystallites of various materials that are dispersed in molten salts which are to be used as a thin film coated onto porous supports or substrates. See col. 2, lines 36-44 of Datta et al.

Examples of the molten salts include those having cationic or positively charged components, such as alkali and alkaline earth metals, lanthanide metals, etc., and having anionic or negatively charged components, such as oxides and nitrates. See col. 3, lines 12-24 of Datta et al. This disclosure is considered to read upon the claimed "catalytic ingredient" and "oxidation facilitating ingredient", as recited in claims 4, 17, and 19.

Examples of the supports or substrates include alumina, silica, titania, magnesia, zirconia, transition metal and lanthanide metal oxides, mixed oxides, and zeolites. See col. 3, lines 25-29 of Datta et al.

Exemplary active metals include ruthenium, palladium, and platinum. See col. 3, lines 30-35 of Datta et al.

Although Datta et al. does not specifically recite the claim limitation "for purifying particulate materials, which are contained in an exhaust gas emitted from an internal combustion engine and contain carbon", such a limitation is considered one of intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Additionally, because Datta et al. as discussed above teach the limitations of the claims in their present form, i.e., molten salt components and support components comparable to that respectively claimed, it would have been obvious to one of ordinary skill in the art to expect the catalyst of Datta et al. to be useful for Applicants' intended use, absent the showing of convincing evidence to the contrary.

Allowable Subject Matter

7. Claims 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Neither Weimer et al. nor Datta et al. teach or suggest the composite nitrates recited in claims 12 and 13.

9. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (703) 308-3317. The examiner can normally be reached on Mondays-Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on (703) 308-3823. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.


Lynn Hailey/plh
Examiner, Art Unit 1755
July 10, 2003


Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700